

Pain. Is it All in the Mind?

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Abstract

This paper attempts to unravel the persuasive and rhetorical procedures that have historically been used to accommodate the experience of pain, to explore the many ways in which nociception and pain may be related. Since we all agree that pain is culturally mediated, the study of the rhetorical modes that have allowed, across the centuries, the cultural understanding of human suffering, seems a clear intellectual need.

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There is no historical evidence that would allow suggesting that the mind, or the brain for that matter, can explain the family of all painful phenomena, from acute and surgical pain to chronic pain, or from visceral pain to phantom limb syndromes. The reasons for giving this answer are of very different kind and in this paper I will divide them in three parts. First, I will try to explain how we should talk about pains, or pain families, rather than pain in singular. Secondly, I will make a clear distinction between nociception, nociceptive pain, and other painful experiences and I will concentrate on two (historical) examples of the lack of agreement between pain in the mind and pain in the body. Finally, I will advocate for a holistic vision of pain that involves not just biomedical sciences and practices, but also the humanities and social sciences.

Pain families

Everybody knows that there is no single medical entity that we can call “pain”. On the contrary, what we describe by the use of that word involves a great variety of experiences. The image of pain associated to an essential mechanism for our survival has been challenged very often. In 1982, Patrick D. Wall and Ronald Melzack published a text that used as its starting point the distinction between acute pain, (one of the visible signs of illness since antiquity), and chronic pain, which they described as an

illness or, more precisely, as a set of symptoms. These two doctors, the creators of the gate-control theory of pain, were not of course alone in this plea. In those days, many members of the scientific community –including physiologists, neurologists or anesthesiologists– recognized that whereas acute pain could maintain some level of utility, at least as far as to allow anticipating the presence of some underlying condition, chronic pain could only be interpreted as a disorder that caused a great deal of suffering for the patient, without any clinical justification for its presence whatsoever.

As in the case of Melzack and Wall, pain medicine began to distinguish between useful pain and useless suffering, between laboratory pain and clinical anguish, between peripheral and central pain, and between pain in the limbs and pain of the internal organs. From the mid-19th century to the present day, pain became the object of three related medical discourses: the symptomatic relief of acute pain, the treatment of severe pain in the terminally ill, and the management of chronic pain in cases of migraine, rheumatoid arthritis, trigeminal neuralgia, and other syndromes of an unspecific nature.

Although the distinction between acute and chronic pain was already present in Romantic physiology, it only emerged explicitly in the second half of the 20th century. The International Association for the Study of Pain, founded in 1973, depended so much on this distinction between the transitory and the chronic that when pain achieved full visibility in the field of clinical research, it did not do so as a single object, but as many. Some of these, like causalgia, phantom limbs, or trigeminal neuralgia, were already long known by medicine, although not always under

these names. Many others, however, appeared along with the new subdivisions and led to the multiplication of theoretical frameworks and explanatory hypotheses.

The so-called “theory of specificity,” for example, allowed an accounting for the majority of types of acute pain, such as contusions, lacerations, or fractures, but was almost no help in complex clinical cases. Partly as a reaction to this theory, from 1894 onward a new explanatory model understood pain as a joint result of specific harmful stimuli and mechanisms related to the stimulus’s intensity. This is the reason that some authors considered pain to be an affective quality that should be distinguished from tactile sensations. For the neurologist Henry Marshal, for example, far from being a sensation, pain was an emotion that could be unleashed by an infinite combination of causes. For almost all clinicians, however, pain was a sensorial aberration that, because it manifested in a plurality of states, made treatment excessively difficult.

Nociception and pain

Another distinction that remains essential to the problem and understanding of pain has also very old origins. Charles Sherrington, a neurologist of the 1900, defined pain as “the psychological adjunct of a protective reflex”¹. We touch something hot and our brain triggers a reflex action that causes us to withdraw our hand from the object and thus protect us from injury. This is, of course, in a sense very similar to the image provided by the French philosopher René Descartes. The value of Sherrington’s definition was the separation between perception and processing. There is, on the one hand, the protective reflex component of the definition, which is certainly in the brain, but there is also what Sherrington called the “psychical adjunct”, the sensory perceptual part. If we understood pain simply as the neural processes that deal with protective reflexes, that is, if we understood pain as simply nociception, then, of course, everything is in the brain (including the nervous system). But the problem is that pain is not just nociception. Pain is also a mental process, a sensory perceptual process added to nociception.

For the President of the International Association for the Study of pain, Fernando Cervero,

“How we match pain and nociception is very much a question of personal values well beyond the realm of science, at least until we know a lot more about the working of the brain”². And he adds, “Although nociception is easily approached with the scientific method, understanding human pain is, at present, beyond that method’s capabilities”. The tenants of this approach depend on different reasons, the most important of them being that many forms of pain are unrelated to protective reflexes, and their usefulness is questionable. Let me give just two different examples.

Railway pain

Let us look at the case of S.W., a tall man with a strong constitution, who was the victim of a severe train collision in the late 19th century³. Following his accident, S.W. ended up with bruises all over his body and received a heavy blow to the face. After the event, he entered a state of nervous depression, with a feeble and rapid pulse and an inability to eat or sleep. His anguish was so great that the scene came back to his mind over and over again⁴. Curiously, some of these symptoms had already been published in the medical magazines of the day⁵. In a climate of growing concern regarding this mode of transport, some publications paid special attention to the trains’ excessive vibration. In 1862, the prestigious medical journal *The Lancet* argued that the train’s continuous oscillations and vibrations could have serious consequences for the passengers’ health. In extreme conditions, cerebral or spinal concussions could destroy organ functions⁶.

Although the corporal injuries healed quickly, nine weeks after the accident S.W. was still in severe pain. Besides, his mental condition showed clear signs of instability. He complained about pain, depression, and sadness. He felt uncomfortable with doctors and burst into tears frequently. His voice had become very weak, almost inaudible. He said he slept badly and continually awoke from nightmares. Fifteen months after the accident, he was still unable to work and four years later, his doctor recognized that he would never be the same again. No one, however, had been able to identify any lesion whatsoever. Herbert Page, the forensic doctor paid by the British rail Company, declared that,

1. Quoted by Fernando Cervero, *Understanding Pain*, London, MIT, Press, 2012, p. 1

2. *Ibidem*, p. 4

3. Ralph Harrington: “The Railway Accident: Trains, Trauma and Technological Crisis in Nineteenth Century Britain, in Mark S. Micale and Paul Lerner (eds.), *Traumatic Past: History and Trauma in the Modern Age, 1870-1930*, New Haven, Conn., Yale University Press, 1998. See also Wolfgang Schivelbush, *The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century*, Oxford, Blackwell, 1977.

4. Herbert Page, *Railway Injuries: with Special Reference to those of the Back and the Nervous System*, in their *Medico-Legal and Clinical Aspects*, London, Charles Griffin & Co, 1891, pp. 151-2.

5. Alfred Ogan, *Railway Collisions Prevented*, London, G.J. Pope, 1855, p. vii.

6. *The Lancet*, 11 January 1862, p. 151. Quoted by Harrington: “The Railway Accident”, p. 114.

very likely, the illness of our gentleman was not due to any bodily injury, but rather to a mental shock, perhaps brought on as a consequence of fear⁷.

The history of “railway spine” has been described in the context of the so-called “psychodynamic revolution” that took place in psychological practice during the second half of the 19th century. Many doctors were aware that the alarming situation created by railway accidents had increased the frequency of these injuries, which had become proportionally more numerous and more severe. The polemic was not so much based on the fact that some doctors (Erichsen) proposed an organic explanation while others (Page) opted for a psychological justification, but rather the order of causation. For some (Erichsen), physical shock caused psychic disorders, while for Page, fear and anxiety caused organic trauma, including pain.

Regardless as to whether the trauma was physical or psychic, surgeons bolstered a new form of testimonial trust: a relationship between the doctor and the patient which was no longer mediated by mechanical forms of objectification, but by the veracity of the patients’ account, by their visual gestures and signs, by the conviction with which they express their symptoms, their family background, the opinion of those who know them, their position in the working world, or the criteria of other colleagues who have examined the case. Without this relationship of trust there was no clinical case, and far from finding ourselves faced with one of the chapters in the cultural history of nervous pain, we would be looking at a section of the difficult and problematic cultural history of deceit and fraud.

Childbirth

My second example deals with a different kind of evaluation of pain. In 1853, Doctor Cazeaux, of the faculty of medicine in Paris, attempted to establish a correct identification of women’s expressive signs and their other physiological circumstances at the time of delivery. He was only interested in what he called “true” pains. As part of a cartography of sensation, these true pains of childbirth were classified as keen, frequent, dreadful, elevated, excessive, or violent. The presence of each one of them determined a precise emotional reaction. Under the influence of some of these pains, for example, future mothers took on a melancholic air that grew progressively

more violent. As birth progressed, the pains became more frequent and, coinciding with the dilation of the neck of the uterus, keener and closer. Throughout the process of delivery, the mother finds herself subject to a force much greater than her will. Her cries and laments do not belong to her. It is not she who screams, but her pain that rends the screams from her; not she who is crying but rather the contractions that pull out her tears. For the obstetrician Meigs, for example, the way in which the mother squeezed the hands of those she held onto should be enough to determine whether or not the birth had entered the expulsion phase or if she was still dilating. For him, as for others, if the duration, intensity, or frequency of the contractions were not equal to the duration, intensity, or frequency of the pain, it is only due to differences in the age, temperament, or education of the mother. Some will protest in excess for slight sensations whereas others will hardly complain from very strong contractions.

The same Doctor Cazeaux, for example, describes the case of a woman in labor who, following prolonged efforts and interminable suffering, suddenly changed her facial expression and began to sing the great aria from Lucia di Lammermoor at the top of her lungs⁸. And this is not the only documented case of pain altering the nervous system to such an extent that the sufferer’s behavior borders on the irrational. Some doctors postulated that, with their intellectual capacities diminished, the future mothers said the most extravagant things in their delirium⁹.

What all these cases come to suggest is that the progressive medicalization of labor from the mid-18th century onwards implied the presence of an authority, the obstetrician, who was not just able to discriminate between true and false pains; he was also able to assess and measure real pains in a much more appropriate manner than women. This is a tendency that we will also see in the 20th and in the 21st century, very often around the debate on the uses anesthesia and labor analgesics.

First of all, during the 20th century, the connection between physiological pain and religious guilt was still very well extended. For many authors, pain was still an essential part of motherhood, which implied that seeking relief equated to an explicit renounce to develop what they understood as a “noble instinct” of women. Still in 1949, the British Minister of Health asked, “How can a woman have that motherly affection for her offspring if she bares it without pain?”

7. Page, *Railway Injuries*, p. 153.

8. *Ibid.*, 430.

9. *Ibid.*, p. 414-432.

At the same time, labor pain analgesia was identified by some feminists as a key element within the struggle for women's rights. For many other women, however, labor pain was only regarded as an extraordinary sensation that could only be labeled "pain" in case of being pathological: "A woman giving birth, wrote the feminist writer of the mid-20th century, was not in torture, she was in labor". This point of view was in accord with the ideas expressed by Grantley Dick-Read, one of the advocates of the so-called "natural childbirth" method, for whom the principal source of pain during birth was fear. If we could eliminate that dreadful emotion, he argued, most analgesics and anesthetics would be redundant. His method (psycho-prophylactic), which included relaxation, exercise and diet, aimed at the reduction of the pain threshold through education and training.

The division between the point of view of those for whom labor pain was necessary, those for whom pain had to be avoided, and those for whom the main constituent element of labor pain was fear, did not have a true correspondence in political terms. While fighting against the medicalization of women's bodies, many feminists regarded labor pain as natural. Conversely, many others considered labor analgesia as another right that women deserved to gain social visibility. But this understanding of labor as truly pathological found a just reply by the natural birth movement of Grantley Dick-Read and the similar thesis on psycho-prophylactic labor defended by the French obstetrician Fernand Lamaze. The idea that pain was essentially in the mind was not only accepted by many women, willing to free themselves from the servitudes of the rather cold and de-personalized birth clinics, but also from Pope Pious XII, who in 1956 praised the virtues of "natural childbirth".

Conclusions

The history of pain has traditionally been written in relation to the internal development of medical or physiological theories of suffering, or in connection to the pharmaceutical remedies used to alleviate it¹⁰. Researchers have also focused on the history of torture, education, or some branches of medicine, like surgery

or obstetrics. In other cases, they have paid attention to the changing attitudes or cultural responses to personal pain and the suffering of others. Research has increasingly fallen on the practices and representations of violence, including in this category military campaigns, religious wars, or modern terrorism¹¹. Just as historians of science attempted to account for the progressive objectification of subjective perceptions, cultural historians, inspired by the new opposition to clinical medicine, have sought in the history of pain the triumph of a new humanitarian model for managing pain and death. In both cases, little has been done to disentangle the social articulation of this experience or to examine its historical forms of collective visibility.

The kind of history of pain I am interested in attempts to unravel the persuasive and rhetorical procedures that have historically been used to accommodate the experience of harm, to explore the many ways in which nociception and pain may be related, and last, but not least, in shedding light on the regimes of social visibility or invisibility of pain and syndromes. Since we all agree that pain is also culturally mediated, all my research has been related to the study of the rhetorical modes that have allowed, across the centuries, the cultural understanding of human suffering. Representation, imitation, sympathy, trust, testimony, correspondence, coherence, narrativity, or reiteration are some of the forms that enable the configuration of pain.

The latest book published on the subject also shares with me some of these preoccupations. "Pain. A Political History", by Keith Weiloo, is an extraordinary book on the history of liberalism and conservatism around physical suffering. The book traces how the question of other people's pain became a recurring site for political battles. What that book suggests, and what my examples come to confirm, is that pain has never been only a clinical or scientific problem. On the contrary, the understanding of pain, of real pain, requires the mobilization of many sources and many different communities. The history of pain involves a political dimension, since what counts as pain depends not just on the testimony of those who complain, it is not simply in their minds, but on the negotiations of our standards of trust.

Visualizing pain and accepting other's complaints requires a joint effort of agreement between

10. The best example of the first option is Rosalyne Rey, *Histoire de la douleur*, Paris, Éditions La Découverte, 1993. The best example of the second approach is Thomas Dormandy, *The Worst of Evils: The Fight Against Pain*, Yale University Press, 2006. Different aspects of the history of pain have been treated by E. Scarry, *The Body in Pain. The Making and Unmaking of the World*, New York, Oxford, Oxford University Press, 1985; David B. Morris, *The Culture of Pain*, Berkeley and Los Angeles, University of California Press, 1991; David Le Breton, *Anthropologie de la douleur*, Paris, Métailié, 1995.

11. Some, very uneven, examples would include: Hannes Etszörfer, ed., *Blutige Geschichten. Ein kulturhistorischer Streifzug durch die Welt der Werbrechen*, Österreichische Nationalbibliothek, Exhibition Catalogue, 2009. David Nirenberg, *Communities of Violence, Persecution of Minorities in the Middle Ages*, Princeton, 1996; Sean McGlynn, *By Sword and Fire. Cruelty and Atrocity in Medieval Warfare*, 2008.

12. Keith Weiloo, *Pain. A Political History*. Baltimore, Johns Hopkins University Press, 2014 p. 83.

not only medical doctors, but also politicians, pharmaceutical companies, and different kinds of associations. Conversely, however, the public comprehension and understanding of pain also works as a Trojan horse, in the sense that, once it enters the public arena, what counts as pain will also determine or challenge our ideas of compassion and sympathy. This means that the social and political dimensions of pain cannot possibly be avoided. It is not simply a social feature that will have to be added to some other physiological or psychological characteristics. On the contrary, the public dimension of pain implies that pain, real pain, and not feigned or exaggerated pain, for example, lies truly embedded within political concerns and social values. Since the problem of pain has always been, to a certain extent, a question of trust, its assessment and treatment was always

embedded into the discourse of those who defended the welfare state and those who were convinced of the pathological malingering of many complainers: "culture, not science, defines what pain means"¹². To the question the whether pain is all in the mind, the answer should be clearly no. But it could only be yes if we understood that pain is not just in the mind of the sufferer, but in the mind of many other actors and witnesses.

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